



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



**MAR 31 2014**

Mr. Phil Castro  
E & J Gallo Winery  
5610 E Olive Ave  
Fresno, CA 93727

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)  
District Facility # C-447  
Project # C-1140177**

Dear Mr. Castro:

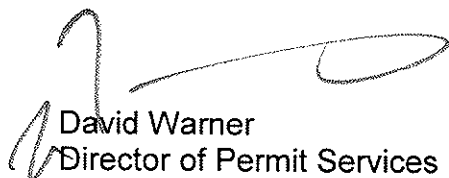
Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The applicant proposes to remove CEQA requirements to mitigate greenhouse gas emissions.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

  
David Warner  
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

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Executive Director/Air Pollution Control Officer

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**San Joaquin Valley Air Pollution Control District**  
**Authority to Construct**  
**Application Review**  
**Modification of a Natural Gas/Biogas-Fired Boiler**

Facility Name: E & J Gallo Winery  
Mailing Address: 5610 E Olive Ave  
Fresno, CA 93727

Date: March 12, 2014  
Engineer: Jesse A. Garcia  
Lead Engineer: Joven Refuerzo

Contact Person: Phil Castro  
Telephone: (559) 458-2588

Application #(s): C-447-295-1

Project #: C-1140177

Deemed Complete: February 11, 2014

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## **I. Proposal**

E & J Gallo Winery has requested an Authority to Construct permit for the modification of a natural gas/biogas-fired boiler. The modification consists of removing the Best Performance Standards consisting of being equipped with an economizer and premium efficiency electric motors, excess air, FGR and blowdown requirements established in Project C-1113298 to deem the increase in greenhouse gas emissions as less than significant. The proposed modification does not result in a change in emissions or process throughput. As indicated in section VIII below, the proposed modification is only a modification in the California Environmental Quality Act requirements and does not constitute an NSR modification to unit C-447-295. Therefore, this project is not subject to District Rule 2201 and no calculations will be performed at this time.

See Appendix A: Current Permit To Operate C-447-295-0.

E & J Gallo Winery has received their Title V Permit. This modification can be classified as a Title V minor modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. E & J Gallo Winery must apply to administratively amend their Title V permit.

## **II. Applicable Rules**

District Rule 2201	New and Modified Stationary Source Review Rule (4/21/2011)
District Rule 2520	Federally Mandated Operating Permits (6/21/2001)
District Rule 4001	New Source Performance Standards (4/14/1999)
District Rule 4101	Visible Emissions (2/17/2005)
District Rule 4102	Nuisance (12/17/1992)
District Rule 4201	Particulate Matter Concentration (12/17/1992)
District Rule 4301	Fuel Burning Equipment (12/17/1992)

District Rule 4304 Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/1995)  
District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/2003)  
District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3 (3/17/2005)  
District Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/2008)  
District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase I (8/21/2003)  
District Rule 4801 Sulfur Compounds (12/17/1992)  
California Health & Safety Code 41700 - Health Risk Assessment  
California Health & Safety Code 42301.6 - School Notice  
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)  
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

### **III. Project Location**

The facility is located at 5610 E Olive Avenue in Fresno, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

### **IV. Process Description**

E & J Gallo Winery will operate this natural gas/biogas-fired boiler to provide heat and steam for their wine production operations at this location.

### **V. Equipment Listing**

#### Pre-Project Equipment Description:

**C-447-295-0:** 99 MMBTU/HR VICTORY ENERGY OPERATIONS NATURAL GAS/BIOGAS-FIRED BOILER EQUIPPED WITH A TODD VERIFLAME MODEL TODD VERIFLAME 99 LOW NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND O2 CONTROLLER SERVED BY A NATIONWIDE MODEL CATASTAK SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

#### Proposed Modification:

**C-447-295-1:** MODIFICATION OF 99 MMBTU/HR VICTORY ENERGY OPERATIONS NATURAL GAS/BIOGAS-FIRED BOILER EQUIPPED WITH A TODD VERIFLAME MODEL TODD VERIFLAME 99 LOW NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND O2 CONTROLLER SERVED BY A NATIONWIDE MODEL CATASTAK SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM: REMOVE CEQA REQUIREMENTS TO MITIGATE GREENHOUSE GAS EMISSIONS

Post Project Equipment Description:

**C-447-295-1:** 99 MMBTU/HR VICTORY ENERGY OPERATIONS NATURAL GAS/BIOGAS-FIRED BOILER EQUIPPED WITH A TODD VERIFLAME MODEL TODD VERIFLAME 99 LOW NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND O2 CONTROLLER SERVED BY A NATIONWIDE MODEL CATASTAK SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

**VI. Emission Control Technology Evaluation**

There are no changes in control methods proposed by the applicant. The emission control device is described in the engineering evaluation for project number C-1113298. No further discussion is necessary.

**VII. General Calculations**

This project does not meet the criteria for a Rule 2201 Modification, as defined in Section 3.25, and is not subject to the requirements of Rule 2201. Therefore, formal calculations for Rule 2201 are not necessary and no further discussion is required.

**VIII. Compliance**

**District Rule 2201 New and Modified Stationary Source Review Rule**

As noted in Section VII of this engineering evaluation, the proposed modification does not constitute an NSR modification; Pursuant to section 3.25 of District Rule 2201, a modification is defined as:

- 3.25.1.1 Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.

The proposed modification does not result in a change in the hour of operation, production rate or method of operation which necessitates a change in permit conditions.

- 3.25.1.2 Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.

The proposed modification does not constitute a structural change or addition to an existing emissions unit which necessitates a change in permit conditions.

- 3.25.1.3 An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.

The proposed modification does not result in an increase in emissions from any emissions unit.

- 3.25.1.4 Addition of any new emissions unit which is subject to District permitting requirements.

The proposed modification does not result in the addition of any new emissions units.

- 3.25.1.5 A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

The proposed modification is not to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

As discussed above, the modification proposed to unit C-447-295-0 does not meet any of the criteria for a modification. Therefore, it is not subject to the requirements of District Rule 2201.

### **Rule 2520 Federally Mandated Operating Permits**

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
  - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC) (See Appendix C). Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment/minor modification application.

## **District Rule 4001 - New Source Performance Standards**

### **40 CFR Part 60 Subpart Db Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

NSPS Subpart Db applies to steam generating units that are constructed, reconstructed, or modified after June 19, 1984 and have a maximum design heat input greater than 100 MMBtu/hr.

Boiler C-447-295 is rated less than 100 MMBtu/hr; therefore, Subpart Db does not apply to the boiler.

### **40 CFR Part 60 Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. 40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Institutional Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction). Subpart Dc has standards for SO<sub>x</sub> and PM<sub>10</sub>. The 99 MMBtu/hr boiler is subject to Subpart Dc requirements.

#### 60.42c – Standards for Sulfur Dioxide

Since coal is not combusted by the boiler in this project, the requirements of this section are not applicable.

#### 60.43c – Standards for Particulate Matter

The boiler is not fired on coal, combusts mixtures of coal with other fuels, combusts wood, combusts mixture of wood with other fuels, or oil; therefore it will not be subject to the requirements of this section.

#### 60.44c – Compliance and Performance Tests Methods and Procedures for Sulfur Dioxide.

Since the boiler in this project is not subject to the sulfur dioxide requirements of this subpart, no testing to show compliance is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

#### 60.45c – Compliance and Performance Test Methods and Procedures for Particulate Matter

Since the boiler in this project is not subject to the particulate matter requirements of this subpart, no testing to show compliance is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

60.46c – Emission Monitoring for Sulfur Dioxide

Since the boiler in this project is not subject to the sulfur dioxide requirements of this subpart, no monitoring is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

60.47c – Emission Monitoring for Particulate Matter

Since the boiler in this project is not subject to the particulate matter requirements of this subpart, no monitoring is required. Therefore, the requirements of this section are not applicable to the boiler in this project.

60.48c – Reporting and Recordingkeeping Requirements

Section 60.48c (a) states that the owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by §60.7 of this part. This notification shall include:

- (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

*The design heat input capacity and type of fuel combusted at the facility will be listed on the unit's equipment description. No conditions are required to show compliance with this requirement.*

- (2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel mixture of fuels under §60.42c or §40.43c.

*This requirement is not applicable since the unit is not subject to §60.42c or §40.43c.*

- (3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

*The facility has not proposed an annual capacity factor; therefore one will not be required.*

- (4) Notification if an emerging technology will be used for controlling SO<sub>2</sub> emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator

*This requirement is not applicable since the unit will not be equipped with an emerging technology used to control SO<sub>2</sub> emissions.*

Section 60.48 c (g) states that the owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The following conditions will be added to the permit to assure compliance with this section.

- A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rules 2201 and 40 CFR 60.48 (c)(g)]
- Permittee shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rules 2201 and 40 CFR 60.48 (c)(g)]

Section 60.48 c (i) states that all records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. District Rule 4320 requires that records be kept for five years.

#### **Rule 4101 Visible Emissions**

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 or 20% opacity. This unit is currently required to be in compliance with the requirements of this Rule. There are no changes expected that would affect this unit's emissions. Therefore, continued compliance is expected and the following condition will be placed on the permit:

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

#### **Rule 4102 Nuisance**

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, the following condition will be listed on the permit to ensure compliance:

- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

#### **California Health & Safety Code 41700 (Health Risk Assessment)**

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

As indicated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.



## Rule 4201 Particulate Matter Concentration

Section 3.0 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. There are no changes to the existing permit units that would change the particulate matter concentration. Therefore, continued compliance with District Rule 4201 requirements is expected and a permit condition will be listed on the permits as follow to ensure continuing compliance:

- {14} *Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration.*  
[District Rule 4201]

## District Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO<sub>2</sub>, NO<sub>2</sub>, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter. As shown below, each unit's maximum hourly emission rates are below the Rule 4301 limits.

District Rule 4301 Limits			
Unit	NO <sub>2</sub>	Total PM	SO <sub>2</sub>
C-447-295	0.66	0.20	0.58
<b>Rule 4301 Limit</b>	<b>140 lb/hr</b>	<b>10 lb/hr</b>	<b>200 lb/hr</b>

As shown above, compliance with this rule is expected.

## District Rule 4304 - Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters

Rule 4304 details the tuning procedure required for boilers, steam generators, and process heaters under Rules 4305, 4306, and 4320. Those rules include an exemption from tune-ups for units that operate an APCO-approved CEMS or alternate monitoring system where the applicable emission limits are periodically monitored. The applicant has proposed to use alternate monitoring system "A" from District Policy SSP-1105, *Alternate Monitoring for Rules 4305, 4306 and 4320* for each boiler. Therefore, these units are not subject to Rule 4304 and no further discussion is required.

## District Rule 4305 - Boilers, Steam Generators and Process Heaters – Phase 2

Pursuant to Section 2.0 of District Rule 4305, these boilers are subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

Since the requirements of District Rule 4320 are either equivalent or more stringent than the requirements of District Rule 4305, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4305. Therefore, no further discussion is required.

### **District Rule 4306 - Boilers, Steam Generators and Process Heaters – Phase 3**

Pursuant to Section 2.0 of District Rule 4306, these boilers are subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

Since the requirements of District Rule 4320 are either equivalent or more stringent than the requirements of District Rule 4306, compliance with District Rule 4320 requirements will satisfy requirements of District Rule 4306. Therefore, no further discussion is required.

### **Rule 4320 - Enhanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr**

The boiler is subject to District Rule 4320 requirements pursuant to Section 2.0 of District Rule 4320.

#### Section 5.2, NO<sub>x</sub> and CO Emissions Limits

Section 5.2 requires NO<sub>x</sub> and carbon monoxide (CO) emissions shall not exceed the limits specified in the following table. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen.

The boiler is rated greater than 20 MMBtu/hr; thus, the applicable emission limit category is Section 5.2, Table 1, Category B, from District Rule 4320.

Rule 4320 Emissions Limits		
Category	Operated on gaseous fuel	
	NO <sub>x</sub> Limit	CO Limit
B. Units with a total rated heat input > 20.0 MMBtu/hr, except for Categories C through G units (Standard Schedule)	7 ppmv or 0.008 lb/MMBtu	400 ppmv

The boiler will be limited to 5 ppmvd NO<sub>x</sub> and 200 ppmvd CO, all corrected to 3% O<sub>2</sub>. Thus, compliance with the District Rule 4320 NO<sub>x</sub> and CO emission limits is expected.

#### Section 5.3, Annual Fee Calculation

Annual Fees are required if an emissions unit will not be meeting the emission limits in Section 5.2 of this rule. Since the proposed boiler will each meet the emissions limits of Section 5.2, the annual fee requirements are not applicable.

#### Section 5.4, Particulate Matter Control Requirements

Section 5.4.1 of this rule requires the operator to comply with one of the following requirements:

1. Fire the boiler exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;
2. Limit fuel sulfur content to no more than five grains of total sulfur per one hundred (100) standard cubic feet;
3. Install and properly operate an emission control system that reduces SO<sub>2</sub> emissions by at least 95% by weight; or limit exhaust SO<sub>2</sub> to less than or equal to 9 ppmv corrected to 3.0% O<sub>2</sub>;

Boiler C-447-295-0 is fired on both PUC-regulated natural gas and biogas. The use of PUC-regulated gas meets the PM<sub>10</sub> requirements. The biogas is currently limited to 50 ppmv H<sub>2</sub>S. This is converted into grains/100 scf below:

$$\frac{\text{Grains}}{100\text{scf}} = \frac{50\text{PartsH}_2\text{S}}{10^6\text{Parts}} \times \frac{\text{lb-mol}}{379.6\text{ft}^3} \times \frac{34\text{lb-H}_2\text{S}}{\text{lb-mol}} \times \frac{32\text{lb-S}}{34\text{lb-H}_2\text{S}} \times \frac{7000\text{grains}}{\text{lb}} \times 100\text{SCF}$$

Grains/100 scf = 3.0

Therefore, the biogas meets the five grains of total sulfur per 100 standard cubic feet standard and boiler C-447-295-0 is expected to comply.

#### Section 5.5, Low Use

Each boiler's annual heat input will exceed the 1.8 billion Btu heat input per calendar year criteria limit addressed by this section. Thus, the requirements of Section 5.5 are not applicable.

#### Section 5.6, Startup and Shutdown Provisions

Section 5.6 states that on and after the full compliance deadline in Section 5.0, the applicable emission limits of Sections 5.2 Table 1 and 5.5.2 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.6.1 through 5.6.5

The applicant has stated the National Board of Boilers and Pressure Vessel Inspectors recommends warming up boilers no faster than one hour for every 100 degrees Fahrenheit of temperature rise to allow expansion of boiler components without overstressing the steel.

The following proposed startup/shutdown provisions will be listed on the permit:

- The total duration of start-up time shall not exceed 5.0 hours per day. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of start-up time shall not exceed 4.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of shutdown time shall not exceed 2.0 hours per day. [District Rules 2201, 4305, 4306, and 4320]
- The total duration of shutdown time shall not exceed 2.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320]

- The permittee shall record the daily startup and shutdown duration times of the boiler. [District Rules 2201, 4305, 4306, and 4320]

#### Section 5.7, Monitoring Provisions

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 emissions limits shall either install and maintain Continuous Emission Monitoring (CEM) equipment for NO<sub>x</sub>, CO and O<sub>2</sub>, or install and maintain APCO-approved alternate monitoring.

For boiler C-447-295-0, the facility will use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-1105), which requires that monitoring of NO<sub>x</sub>, CO, and O<sub>2</sub> exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the permit in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

- The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub>, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. NH<sub>3</sub> monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within five days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]
- If the NO<sub>x</sub>, CO or NH<sub>3</sub> concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than one hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following one hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320]
- All NO<sub>x</sub>, CO, O<sub>2</sub> and NH<sub>3</sub> emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The NO<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4102, 4305, 4306, and 4320]

- The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub>, CO and NH<sub>3</sub> concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH<sub>3</sub> emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4102, 4305, 4306, and 4320]

Section 5.7.6 outlines requirements for monitoring SO<sub>x</sub> emissions. For units that are complying with Section 5.4.1.1 or 5.4.1.2 of this Rule, the facility must provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit to Operate. This boiler is complying using Sections 5.4.1.1 or 5.4.1.2.

This unit is fired on PUC-Regulated natural gas. Therefore, the following requirement will be included on the permit to comply with the SO<sub>x</sub> emissions monitoring requirement:

- The permittee shall submit an analysis showing the natural gas fuel sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]

Additionally, this boiler can be fired on biogas from permit unit C-447-226. Permit unit C-447-226 includes a scrubber that reduces the H<sub>2</sub>S concentration of the biogas at the scrubber outlet to 50 ppmv or lower. The weekly/monthly monitoring performed for unit C-447-226 satisfies the SO<sub>x</sub> monitoring requirements of District Rule 4320 for this boiler. The H<sub>2</sub>S monitoring requirement listed on District permit C-447-226 will be restated on the boiler permit as follows:

- The permittee shall monitor the biogas H<sub>2</sub>S concentration at the outlet of the biogas scrubber (Permit to Operate C-447-226) on a weekly basis. If the biogas H<sub>2</sub>S concentration does not exceed 50 ppmv for four consecutive weeks, monitoring may be conducted on a monthly basis. If the H<sub>2</sub>S concentration at the outlet exceeds 50 ppmv, weekly monitoring shall resume. [District Rule 4320]

#### Section 6.1, Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate non-compliance with the applicable requirements of this rule shall constitute a violation of this rule.

The following condition will be listed on the permit to ensure compliance:

- All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

Section 6.1.2 requires that the operator of a unit subject to Section 5.5 shall record the amount of fuel use at least on a monthly basis. Since the boiler is not subject to the requirements listed in Section 5.5, Section 6.1.2 requirements are not applicable.

Section 6.1.3 requires that the operator of a unit subject to Section 5.5.1 or 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics have been performed. These boilers are not subject to Sections 5.5.1 or 6.3.1. Therefore, the requirements of this section do not apply.

Section 6.1.4 requires that the operator of a unit with startup or shutdown provisions keep records of the duration of the startup or shutdowns. The following condition will be listed on the permit:

- The permittee shall record the daily startup and shutdown duration times of the boiler. [District Rules 2201, 4305, 4306, and 4320]

Section 6.1.5 requires that the operator of a unit fired on liquid fuel during PUC-quality natural gas curtailment periods record the sulfur content of the fuel, amount of fuel used, and duration of the natural gas curtailment period. The boiler is not fired on liquid fuels. Therefore, the requirements of this section do not apply.

#### Section 6.2, Test Methods

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

Pollutant	Units	Test Method Required
NO <sub>x</sub>	ppmv	EPA Method 7E or ARB Method 100
NO <sub>x</sub>	lb/MMBtu	EPA Method 19
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O <sub>2</sub>	%	EPA Method 3 or 3A, or ARB Method 100
Stack Gas Velocities	ft/min	EPA Method 2 or 19
Stack Gas Moisture Content	%	EPA Method 4

The following permit conditions will be listed on the permit:

- Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
- NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]

- CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
- Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]

### Section 6.3, Compliance Testing

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.2 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the source test may be deferred for up to thirty-six months. The following condition will be included on the permit:

- Source testing to measure natural gas combustion NO<sub>x</sub>, CO, and NH<sub>3</sub> emissions from this unit shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas/biogas, the unit shall be tested not less than once every 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 2201, 4102, 4305, 4306, and 4320]

### Conclusion

Compliance with District Rule 4320 requirements is expected.

## **District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1**

This rule applies to boilers, steam generators, and process heaters at NO<sub>x</sub> Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4320. Therefore, compliance with this rule is expected.

## **District Rule 4801 Sulfur Compounds**

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO<sub>2</sub>, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With:

N = moles SO<sub>2</sub>

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

$$R \text{ (Universal Gas Constant)} = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$$

EPA F-Factor for Natural Gas = 8,578 dscf/MMBtu at 60 °F

#### Natural Gas Combustion:

$$\frac{0.00285 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1.97 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = 1.97 ppmv < 2,000 ppmv (or 0.2%)

#### Biogas Combustion

It is assumed that the F-Factor for the biogas is nearly equivalent to the F-Factor for natural gas.

F-Factor for Biogas: 8,872 dscf/MMBtu (Per Engineering Evaluation for Project C-1091102)

$$\frac{0.012 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 8.3 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 8.3 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

Therefore, compliance with District Rule 4801 requirements is expected.

#### **California Health & Safety Code 42301.6 (School Notice)**

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

#### **California Environmental Quality Act (CEQA)**

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.



The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that there are no potential emission increases; therefore, there is a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

Additionally, in the previous project, C-1113298, the applicant proposed to implement Best Performance Standards (BPS) for the boiler to deem the increase in greenhouse gas emissions as less than significant. The following conditions were placed on the ATC to satisfy BPS:

- *The boiler shall be equipped with an economizer system that consists of, at a minimum, a single stage economizer section which will recover energy from the boiler flue gas by heat exchange with the boiler feed water. The economizer system shall be designed at maximum boiler firing rate to either 1) reduce the temperature of the economizer flue gas outlet to a value no greater than 20 deg F above the temperature of the boiler feed water at maximum firing rate, or 2) heat the boiler feed water to a temperature which is no less than 30 deg F below the steam temperature at the steam drum, or 3) reduce the final temperature of the boiler's flue gas to a temperature no greater than 200 deg F. [California Environmental Quality Act]*
- *Electric motors driving combustion air fans and induced draft fans shall have an efficiency meeting the standards of the National Electrical Manufacturer's Association (NEMA) for "premium efficiency" motors and shall each be operated with a variable frequency speed control or equivalent for control of flow through the fan. [California Environmental Quality Act]*
- *The boiler shall be equipped with an O2 trim system designed to control oxygen content of the stack gases to a maximum of 3% by volume dry basis except during any period where the rate of fuel consumption by the boiler is less than 20% of maximum rated firing. [California Environmental Quality Act]*
- *The boiler shall be designed to limit the recirculation of flue gas to a value not exceeding 10 percent of total flue gas volume while meeting the applicable requirements for control of NOx emissions from the boiler. [California Environmental Quality Act]*
- *The boiler shall be equipped with an automatic boiler blowdown control system which minimizes boiler blowdown while controlling dissolved solids in the boiler water at an optimum level. [California Environmental Quality Act]*
- *The boiler shall be equipped with a flash steam recovery system which will recover flash steam from the blowdown pressure reduction and utilize it for feedwater heating in the deaerator or feedwater heater. [California Environmental Quality Act]*

Pursuant to the District's Draft Policy "CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation", projects/units that are subject to the California Air Resources Board Cap-and-Trade regulation are deemed to have a less than significant impact on global climate change. The facility is subject to the California Air Resources Board Cap-and-Trade regulation as the facility has CO<sub>2</sub>e emissions from stationary combustion equipment greater than 25,000 metric tons as demonstrated in Appendix F of Project C-1113298; therefore, the conditions referenced above are no longer required to maintain a less than significant impact on global climate change. As proposed in this project by the applicant the above BPS conditions will be removed.

#### **IX. Recommendation**

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct C-447-295-1 subject to the permit conditions on the attached draft Authority to Construct in Appendix B.

#### **X. Billing Information**

<b>Annual Permit Fees</b>			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-447-295-1	3020-02-H	99 MMBtu/hr	\$1,030

#### **Appendixes**

- A: Current Permit to Operate
- B: Draft Authority to Construct
- C: Certificate of Conformity

## **APPENDIX A**

### **Current Permit to Operate**

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-447-295-0

**EXPIRATION DATE:** 06/30/2016

**EQUIPMENT DESCRIPTION:**

99 MMBTU/HR VICTORY ENERGY OPERATIONS NATURAL GAS/BIOGAS-FIRED BOILER EQUIPPED WITH A TODD VERIFLAME MODEL TODD VERIFLAME 99 LOW NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND O2 CONTROLLER SERVED BY A NATIONWIDE MODEL CATASTAK SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #4)

## PERMIT UNIT REQUIREMENTS

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1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The boiler shall be equipped with an economizer system that consists of, at a minimum, a single stage economizer section which will recover energy from the boiler flue gas by heat exchange with the boiler feed water. The economizer system shall be designed at maximum boiler firing rate to either 1) reduce the temperature of the economizer flue gas outlet to a value no greater than 20 deg F above the temperature of the boiler feed water at maximum firing rate, or 2) heat the boiler feed water to a temperature which is no less than 30 deg F below the steam temperature at the steam drum, or 3) reduce the final temperature of the boiler's flue gas to a temperature no greater than 200 deg F. [California Environmental Quality Act]
7. Electric motors driving combustion air fans or induced draft fans shall have an efficiency meeting the standards of the National Electric Manufacturer's Association (NEMA) for "premium efficiency" motors and shall each be operated with a variable speed control or equivalent for control of flow through the fan. [California Environmental Quality Act]
8. The boiler shall be equipped with an O2 trim system designed to control oxygen content of the stack gases to a maximum of 3% by volume dry basis except during any period where the rate of fuel consumption by the boiler is less than 20% of maximum rated firing. [California Environmental Quality Act]
9. The boiler shall be designed to limit the recirculation of flue gas to a value not exceeding 10 percent of total flue gas volume while meeting the applicable requirements for control of NOx emissions from the boiler. [California Environmental Quality Act]
10. The boiler shall be equipped with an automatic boiler blowdown control system which minimizes boiler blowdown while controlling dissolved solids in the boiler water at an optimum level. [California Environmental Quality Act]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The boiler shall be equipped with a flash steam recovery system which will recover flash steam from the blowdown pressure reduction and utilize it for feedwater heating in the deaerator or feedwater heater. [California Environmental Quality Act]
12. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48 (c)(g)] Federally Enforceable Through Title V Permit
13. The unit shall only be fired on PUC-regulated natural gas and/or on scrubbed biogas from C-447-226. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. The H<sub>2</sub>S content of the scrubbed biogas fuel shall not exceed 50 ppmv. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. Except during start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 5 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.006 lb-NO<sub>x</sub>/MMBtu; 0.0022 lb-PM<sub>10</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> (equivalent to 0.147 lb-CO/MMBtu); or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. During start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 0.83 lb-NO<sub>x</sub>/hr; 0.0022 lb-PM<sub>10</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> (equivalent to 0.147 lb-CO/MMBtu); or 0.0055 lb-VOC/MMBtu.. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The total duration of start-up time shall not exceed 5.0 hours per day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The total duration of startup time shall not exceed 4.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The total duration of shutdown time shall not exceed 2.0 hours per day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The total duration of shutdown time shall not exceed 2.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall maintain daily records of start-up and shutdown durations and number of occurrences of each. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The ammonia (NH<sub>3</sub>) emissions shall not exceed 10 ppmvd @ 3% O<sub>2</sub> over a 15 minute averaging period. [District Rule 4102]
23. Source testing to measure natural gas combustion NO<sub>x</sub>, CO, and NH<sub>3</sub> emissions from this unit shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas, the unit shall be tested not less than once every 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 2201, 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Nitrogen oxide (NO<sub>x</sub>) emission concentrations in ppmv referenced at dry stack emissions shall be corrected to 3% O<sub>2</sub> and lb/MMBtu rates shall be calculated as lb NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 4102]
31. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. The permittee shall monitor and record the stack concentration of NOx, CO, NH3, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. NH3 monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within five days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. If the NOx, CO or NH3 concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than one hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after one hour of operation following detection, the permittee shall notify the District within the following one hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. All NOx, CO, O2 and NH3 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The NOx, CO and O2 analyzer as well as the NH3 emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. NH3 emission readings shall be conducted at the time the NOx, CO and O2 readings are taken. The readings shall be converted to ppmvd @ 3% O2. [District Rule 4102]
38. The permittee shall maintain records of: (1) the date and time of NOx, CO, NH3, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx, CO, and NH3 concentrations corrected to 3% O2, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH3 emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

40. Permittee shall determine sulfur content of combusted natural gas annually or shall demonstrate that the combusted natural gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
41. The permittee shall monitor the biogas H<sub>2</sub>S concentration at the outlet of the biogas scrubber (Permit to Operate C-447-226) on a weekly basis. If the biogas H<sub>2</sub>S concentration does not exceed 50 ppmv for four consecutive weeks, monitoring may be conducted on a monthly basis. If the H<sub>2</sub>S concentration at the outlet exceeds 50 ppmv, weekly monitoring shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
42. The permittee shall take readings of the NO<sub>x</sub> concentration and O<sub>2</sub> percent, by volume, using the in-stack monitoring system at least once per each day that the boiler operates. [District Rule 2201 and 40 CFR Part 64.9] Federally Enforceable Through Title V Permit
43. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NO<sub>x</sub> and O<sub>2</sub> concentrations. The permittee shall maintain records of the portable analyzer readings including the date(s) and reason the in-stack monitoring system was not operating. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The permittee shall maintain daily records of the NO<sub>x</sub> and O<sub>2</sub> concentration from the in-stack monitoring system. These records shall be made available for District inspection upon request. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall compare the NO<sub>x</sub> and O<sub>2</sub> concentrations from the in-stack monitoring system with the concentration of NO<sub>x</sub> and O<sub>2</sub> readings from calibration gas cylinders for NO<sub>x</sub> and O<sub>2</sub> at least once during each month that the boiler operates. The permittee shall maintain these comparison readings and these records shall be available for District inspection upon request. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
46. If the NO<sub>x</sub> or O<sub>2</sub> concentrations, as measured by the in-stack monitoring system, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the in-stack monitoring system continues to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
47. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64.7] Federally Enforceable Through Title V Permit
48. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8] Federally Enforceable Through Title V Permit
49. The permittee shall comply with the record keeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64.9] Federally Enforceable Through Title V Permit
50. Permittee shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rules 2201 and 40 CFR 60.48 (c)(g)] Federally Enforceable Through Title V Permit
51. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

## **APPENDIX B**

### **Draft Authority to Construct**



San Joaquin Valley  
Air Pollution Control District

## AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-447-295-1

LEGAL OWNER OR OPERATOR: E & J GALLO WINERY

MAILING ADDRESS: 5610 E OLIVE AVE  
FRESNO, CA 93727

LOCATION: 5610 E OLIVE AVE  
FRESNO, CA 93727

### EQUIPMENT DESCRIPTION:

MODIFICATION OF 99 MMBTU/HR VICTORY ENERGY OPERATIONS NATURAL GAS/BIOGAS-FIRED BOILER EQUIPPED WITH A TODD VERIFLAME MODEL TODD VERIFLAME 99 LOW NOX BURNER, FLUE GAS RECIRCULATION SYSTEM, AND O2 CONTROLLER SERVED BY A NATIONWIDE MODEL CATASTAK SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM: REMOVE CEQA REQUIREMENTS TO MITIGATE GREENHOUSE GAS EMISSIONS

## CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

C-447-295-1 : Mar 12 2014 2:59PM -- GARCIAJ : Joint Inspection NOT Required

6. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48 (c)(g)] Federally Enforceable Through Title V Permit
9. The unit shall only be fired on PUC-regulated natural gas and/or on scrubbed biogas from C-447-226. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
10. The H<sub>2</sub>S content of the scrubbed biogas fuel shall not exceed 50 ppmv. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. Except during start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 5 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or 0.006 lb-NO<sub>x</sub>/MMBtu; 0.0022 lb-PM<sub>10</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> (equivalent to 0.147 lb-CO/MMBtu); or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. During start-up and shutdown, emissions from this unit shall not exceed any of the following limits: 0.83 lb-NO<sub>x</sub>/hr; 0.0022 lb-PM<sub>10</sub>/MMBtu; 200 ppmvd CO @ 3% O<sub>2</sub> (equivalent to 0.147 lb-CO/MMBtu); or 0.0055 lb-VOC/MMBtu.. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The total duration of start-up time shall not exceed 5.0 hours per day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The total duration of startup time shall not exceed 4.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The total duration of shutdown time shall not exceed 2.0 hours per day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The total duration of shutdown time shall not exceed 2.0 hours per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain daily records of start-up and shutdown durations and number of occurrences of each. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The ammonia (NH<sub>3</sub>) emissions shall not exceed 10 ppmvd @ 3% O<sub>2</sub> over a 15 minute averaging period. [District Rule 4102]
19. Source testing to measure natural gas combustion NO<sub>x</sub>, CO, and NH<sub>3</sub> emissions from this unit shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas, the unit shall be tested not less than once every 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 2201, 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Nitrogen oxide (NO<sub>x</sub>) emission concentrations in ppmv referenced at dry stack emissions shall be corrected to 3% O<sub>2</sub> and lb/MMBtu rates shall be calculated as lb NO<sub>2</sub>/MMBtu of heat input (hhv). [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 4102]
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. The permittee shall monitor and record the stack concentration of NOx, CO, NH3, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. NH3 monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within five days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. If the NOx, CO or NH3 concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than one hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after one hour of operation following detection, the permittee shall notify the District within the following one hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. All NOx, CO, O2 and NH3 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The NOx, CO and O2 analyzer as well as the NH3 emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. NH3 emission readings shall be conducted at the time the NOx, CO and O2 readings are taken. The readings shall be converted to ppmvd @ 3% O2. [District Rule 4102]
34. The permittee shall maintain records of: (1) the date and time of NOx, CO, NH3, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx, CO, and NH3 concentrations corrected to 3% O2, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH3 emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

36. Permittee shall determine sulfur content of combusted natural gas annually or shall demonstrate that the combusted natural gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
37. The permittee shall monitor the biogas H<sub>2</sub>S concentration at the outlet of the biogas scrubber (Permit to Operate C-447-226) on a weekly basis. If the biogas H<sub>2</sub>S concentration does not exceed 50 ppmv for four consecutive weeks, monitoring may be conducted on a monthly basis. If the H<sub>2</sub>S concentration at the outlet exceeds 50 ppmv, weekly monitoring shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
38. The permittee shall take readings of the NO<sub>x</sub> concentration and O<sub>2</sub> percent, by volume, using the in-stack monitoring system at least once per each day that the boiler operates. [District Rule 2201 and 40 CFR Part 64.9] Federally Enforceable Through Title V Permit
39. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NO<sub>x</sub> and O<sub>2</sub> concentrations. The permittee shall maintain records of the portable analyzer readings including the date(s) and reason the in-stack monitoring system was not operating. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
40. The permittee shall maintain daily records of the NO<sub>x</sub> and O<sub>2</sub> concentration from the in-stack monitoring system. These records shall be made available for District inspection upon request. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
41. The permittee shall compare the NO<sub>x</sub> and O<sub>2</sub> concentrations from the in-stack monitoring system with the concentration of NO<sub>x</sub> and O<sub>2</sub> readings from calibration gas cylinders for NO<sub>x</sub> and O<sub>2</sub> at least once during each month that the boiler operates. The permittee shall maintain these comparison readings and these records shall be available for District inspection upon request. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
42. If the NO<sub>x</sub> or O<sub>2</sub> concentrations, as measured by the in-stack monitoring system, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the in-stack monitoring system continues to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
43. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64.7] Federally Enforceable Through Title V Permit
44. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the record keeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64.9] Federally Enforceable Through Title V Permit
46. Permittee shall maintain daily records of the type and quantity of fuel combusted by the boiler. [District Rules 2201 and 40 CFR 60.48 (c)(g)] Federally Enforceable Through Title V Permit
47. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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## **APPENDIX C**

### **Certificate of Conformity**

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

☒ Federal Major Permit MODIFICATION

☐ MINOR PERMIT MODIFICATION

☐ ADMINISTRATIVE  
AMENDMENT

COMPANY NAME: E&J Gallo Winery - Fresno	FACILITY ID C-447
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: E&J Gallo Winery-Fresno	
3. Agent to the Owner: Mr. Phil Castro	

**II. COMPLIANCE CERTIFICATION** (Read each statement carefully and initial **all** circles for confirmation):

☒ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

☒ Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

☒ Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

☒ Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:



\_\_\_\_\_  
Signature of Responsible Official

01/09/14

\_\_\_\_\_  
Date

Mr. Phil Castro

\_\_\_\_\_  
Name of Responsible Official (please print)

Plant Manager – Fresno Winery

\_\_\_\_\_  
Title of Responsible Official (please print)